



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECfp®2006 = 54.7

BL265 (Intel Xeon X5650, 2.66 GHz)

SPECfp_base2006 = 53.0

CPU2006 license: 20

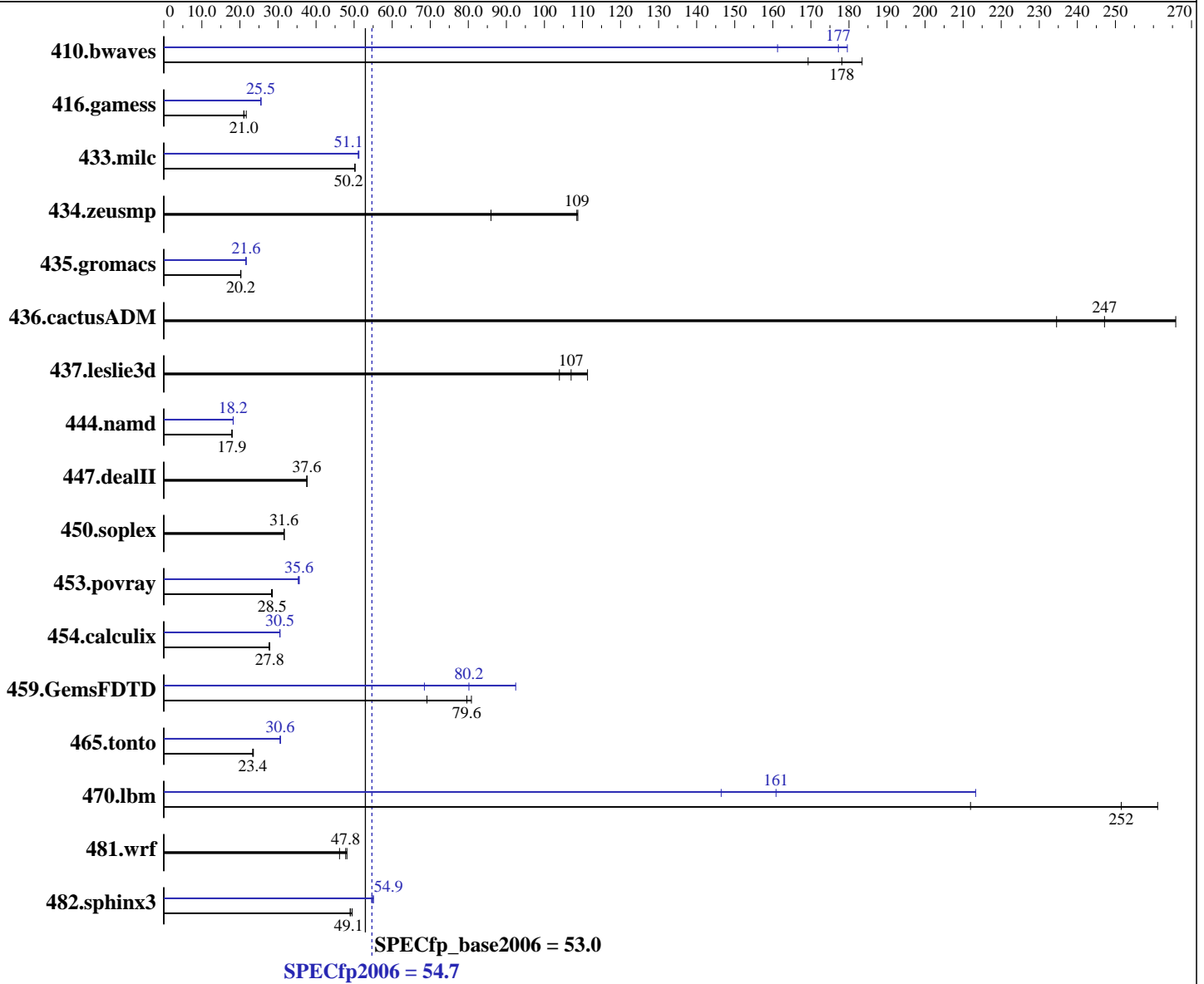
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Feb-2011

Hardware Availability: Mar-2010

Software Availability: Apr-2011



Hardware

CPU Name: Intel Xeon X5650
 CPU Characteristics: Intel Turbo Boost Technology up to 3.06 GHz
 CPU MHz: 2667
 FPU: Integrated
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core

Continued on next page

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64) SP1, Kernel 2.6.32.12-0.7-default
 Compiler: Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64 Version 12.0 Update 3
 Auto Parallel: Yes
 File System: ext3
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECfp2006 = **54.7**

BL265 (Intel Xeon X5650, 2.66 GHz)

SPECfp_base2006 = **53.0**

CPU2006 license: 20

Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Feb-2011

Hardware Availability: Mar-2010

Software Availability: Apr-2011

L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem: 1 x 73 GB SAS, 10000 RPM
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	76.3	178	80.3	169	74.1	183	76.7	177	75.7	180	84.3	161
416.gamess	904	21.7	931	21.0	931	21.0	768	25.5	767	25.5	767	25.5
433.milc	183	50.2	183	50.2	183	50.2	179	51.1	179	51.3	180	51.1
434.zeusmp	83.9	109	106	86.0	83.7	109	83.9	109	106	86.0	83.7	109
435.gromacs	353	20.3	354	20.2	353	20.2	330	21.6	331	21.6	330	21.6
436.cactusADM	50.9	235	48.4	247	44.9	266	50.9	235	48.4	247	44.9	266
437.leslie3d	90.4	104	84.4	111	87.8	107	90.4	104	84.4	111	87.8	107
444.namd	448	17.9	448	17.9	447	17.9	440	18.2	440	18.2	440	18.2
447.dealII	304	37.6	304	37.6	304	37.6	304	37.6	304	37.6	304	37.6
450.soplex	263	31.7	264	31.6	264	31.6	263	31.7	264	31.6	264	31.6
453.povray	187	28.5	188	28.3	187	28.5	151	35.3	150	35.6	150	35.6
454.calculix	299	27.6	296	27.8	297	27.8	271	30.5	270	30.5	270	30.5
459.GemsFDTD	133	79.6	153	69.1	131	80.8	132	80.2	155	68.5	115	92.5
465.tonto	418	23.5	421	23.4	421	23.4	321	30.7	322	30.6	322	30.6
470.lbm	52.6	261	54.6	252	64.8	212	85.4	161	93.8	146	64.4	213
481.wrf	234	47.8	242	46.2	232	48.1	234	47.8	242	46.2	232	48.1
482.sphinx3	397	49.1	394	49.5	398	49.0	354	55.1	357	54.6	355	54.9

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
Hugepages was enabled with the following:
'nodev /mnt/hugepages hugetlbfs defaults 0 0' added to /etc/fstab
echo 900 > /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
export LD_PRELOAD=/usr/lib64/libhugetlbfs.so
```

Platform Notes

Turbo Mode enabled in BIOS
Turbo Boost set to Traditional in BIOS
Power C-states enabled in BIOS
Demand Scrub disabled in BIOS



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS	SPECfp2006 =	54.7
BL265 (Intel Xeon X5650, 2.66 GHz)	SPECfp_base2006 =	53.0
CPU2006 license: 20	Test date:	Feb-2011
Test sponsor: Bull SAS	Hardware Availability:	Mar-2010
Tested by: Bull SAS	Software Availability:	Apr-2011

General Notes

OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter
KMP_STACKSIZE set to 200M

Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECfp2006 = 54.7

BL265 (Intel Xeon X5650, 2.66 GHz)

SPECfp_base2006 = 53.0

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Bull SAS

Test date: Feb-2011
Hardware Availability: Mar-2010
Software Availability: Apr-2011

Base Optimization Flags (Continued)

Fortran benchmarks:

`-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch`

Benchmarks using both Fortran and C:

`-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias`

Peak Compiler Invocation

C benchmarks:

`icc -m64`

C++ benchmarks:

`icpc -m64`

Fortran benchmarks:

`ifort -m64`

Benchmarks using both Fortran and C:

`icc -m64 ifort -m64`

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32
-ansi-alias`

470.lbm: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -parallel
-ansi-alias -static -auto-ilp32`

482.sphinx3: `-xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -ansi-alias
-parallel`

C++ benchmarks:

444.namd: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -fno-alias
-auto-ilp32`

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECfp2006 = 54.7

BL265 (Intel Xeon X5650, 2.66 GHz)

SPECfp_base2006 = 53.0

CPU2006 license: 20

Test date: Feb-2011

Test sponsor: Bull SAS

Hardware Availability: Mar-2010

Tested by: Bull SAS

Software Availability: Apr-2011

Peak Optimization Flags (Continued)

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Fortran benchmarks:

410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -parallel
-static

416.gamess: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-inline-level=0 -scalar-rep- -static

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-inline-level=0 -opt-prefetch -parallel
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc
-opt-malloc-options=3 -auto -unroll4
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Benchmarks using both Fortran and C:

435.gromacs: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32
-ansi-alias

436.cactusADM: basepeak = yes

454.calculix: -xSSE4.2 -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias

481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.html>



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECfp2006 = 54.7

BL265 (Intel Xeon X5650, 2.66 GHz)

SPECfp_base2006 = 53.0

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Bull SAS

Test date: Feb-2011
Hardware Availability: Mar-2010
Software Availability: Apr-2011

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.xml>

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 16:10:57 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 3 March 2011.